

### III. Remarks

#### A. Claim Amendments

Claims 1, 6, 7 and 12-17 have been amended as set forth above and described below. Claims 2-5 and 11 have been canceled. Claims 8-10 are unchanged.

#### B. Rejection under 35 U.S.C. § 101

The Action rejects claim 11 as not falling within a statutory category of invention. The Applicant submits that this rejection is mooted by the cancellation of claim 11.

#### C. Rejection under 35 U.S.C. § 102

The Action rejects claims 1-2, 4-7 and 9-11 as being anticipated by Lang et al. (WO 02/30283 A2). Reconsideration and withdrawal of this rejection are respectfully requested in view of the foregoing amendments and the following arguments.

Claim 1 has been amended to include the now combined features recited in each of canceled claims 2-4. This amendment clarifies that the evaluating means makes evaluation on the basis of the corrected gradation of a particular region and that the particular region is a region of the mandible in the X-ray picture. Claim 1 has also been amended to recite a detecting means for detecting a gradation of a particular portion of said picture of said specimen. It should be noted that the “particular portion” refers to a portion of the picture of the specimen, which is not the aforementioned “particular region” of the mandible in the X-ray picture. The gradation of the X-ray picture as a whole is corrected in such a manner as to make the gradation of the “particular portion”, i.e., the result of detection by the detecting means, correspond to the standard value. The bone mineral density is then evaluated based on the corrected gradation of the “particular region”, which is different from the “particular portion” in the gradation-corrected X-ray picture. The “particular portion”, thus, is a kind of index for use in correction the gradation of the X-ray picture as a whole, while the “particular region” is a region to be evaluated in the thus corrected X-ray picture.

In evaluating previously presented (now canceled) claim 4, the Examiner states that Lang et al. discloses, in Page 32, Lines 2-4, what is equivalent to the “particular portion” or, specifically, an “anatomical region.” However, the anatomical region of Lang et al. is an object to be evaluated, such as an edge of the mandible, which is different from the “particular portion” of the picture of the specimen as recited in amended claim 1. Also, Lang et al. neither discloses nor suggests anything about correcting the gradation of the X-ray picture as a whole to make the gradation of the “particular portion” correspond to the standard value so that the bone mineral density can be evaluated on the basis of the corrected gradation of the “particular region”, which is different from the “particular portion”, of the gradation-corrected X-ray picture.

For the foregoing reasons, Applicant respectfully submits that amended claim 1 is not anticipated by and is allowable over the cited reference. Claims 6-7 and 9-10 depend from claim 1 and are, therefore, also not anticipated by the cited reference. Reconsideration and withdrawal of the anticipation rejection of these claims are respectfully requested.

**D. Rejection under 35 U.S.C. § 102**

The Action rejects claims 3, 12-14 and 16-17 as being obvious from Lange et al.

Claim 3 has been canceled.

Independent claim 12 has been amended to specifically recite that the “particular region” is a region of the mandible as taken on the X-ray picture. Amended claim 12 recites that the detecting means operates to detect one or both of average and deviation of the gradation of a picture of a specimen, that the gradation of the X-ray picture is corrected in such a manner that the result of the detection by the detecting means can comply with the standard value, and that the bone mineral density evaluation is made on the basis of the corrected gradation of a particular region of the mandible photographed on the X-ray picture, which is not a portion of the specimen on which the detecting means operates as claimed.

In rejecting claim 12 as previously presented, the Examiner states that Lang et al. shows, in Table 1 and at Pages 38-39, what are equivalent to average and deviation of the gradation of

the picture of the specimen, more specifically, “mean pixel intensity” and “variance of pixel intensity.” However, these “mean pixel intensity” and “variance of pixel intensity” are those of ROI to be evaluated, not the average and deviation in gradation of the picture of the specimen as recited in claim 12. Also, Lang et al. discloses or suggests nothing about correcting the gradation of the X-ray picture in such a manner as to make one or both of the average and deviation in gradation of the specimen (i.e., the result of detection by the detecting means) comply with the standard value, and evaluating the bone mineral density on the basis of the corrected gradation of the particular region, which is not a portion of the specimen on which the detecting means made its graduation detection.

Therefore, Applicant respectfully submits that amended claim 12 is not obvious from the cited reference or the other art of record and is in allowable form. Claims 13-14 and 16-17 depend from claim 12 and are, therefore, allowable for at least the reasons set forth above in connection with claim 12.

The Action rejects claims 8 and 15 as being obvious from Lang et al. in view of U.S. Patent No. 6,819,794 to Inoue. Claims 8 and 15 depend from claims 1 and 12, respectively, and are, therefore, allowable for at least the reasons set forth above in connection with those claims.

Reconsideration and withdrawal of the obviousness rejection of the claims are respectfully requested.

**IV. Conclusion**

In view of the foregoing remarks and amendments, Applicant submits that this application is in condition for allowance at an early date, which action is earnestly solicited.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account **04-1679**.

Respectfully submitted,

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